

22 February 2005

CESAJ-RD-SS
SAJ-2004-2859(IP-AAZ)

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment and
Statement of Finding for Above-Numbered Permit Application

Applicant: Palm Beach County
Attn: Ms. Audrey Wolf
3323 Belvedere Road
West Palm Beach, FL 33406

2. Location, Existing Site Conditions, Project Description,
Changes to Project:

a. Location: The project, known as the Scripps Research Institute (SCRIPPS) in Palm Beach County, is located in waters of the United States on an active orange grove in the northeast corner of the intersection of Seminole Pratt Whitney Road and 100th Lane North in Sections 7 and 8, Township 42S, Range 41E, Palm Beach County, Florida.

b. Existing Site Conditions: The biotechnology research park would be constructed on approximately 535 acres of a 1,900-acre site (referred to as Mecca Farms), which currently is being utilized as an active orange grove with a 27.6-acre active sand mine operation on a portion of the site. The surface water management system consists of perimeter canals and berms, primary water drainage canals, and groves with a series of parallel drainage ditches spaced at 360-foot intervals. Of the 535 acres, approximately 486.1 acres are uplands, 27.6 acres are an active sand quarry pit (which is not jurisdictional since it is active), and 21.3 acres are jurisdictional drainage ditches. The primary canals and ditches are considered to be jurisdictional waters of the United States. The drainage ditches are permanently inundated and drain/irrigate the surrounding orange groves. Vegetation is present in the ditches in a narrow littoral edge, including a mixture of mainly exotic and nuisance species of cattail (*Typha* spp.), water pennywort (*Hydrocotyle* spp.), primrose willow (*Ludwigia peruviana*), and coontail (*Ceratophyllum demersum*). Vegetation in the quarry is very sparse and limited to a few patchy areas, which includes

cattail, torpedo grass (*Panicum repens*), maidencane (*Panicum hemitomon*), and water pennywort. The site is bordered by active orange groves and undeveloped public land (Unit 11 Hungryland Slough) to the north; undeveloped private land to the east; an active orange grove, Northlake Road, and residential development to the south; and Seminole-Pratt Whitney Road (unimproved) and J.W. Corbett Wildlife Management Park to the west. The project site was historically part of the Hungryland Slough and predominately wetland. The ditches were constructed in place of historic flowways to drain the site in preparation for agriculture. Thus the ditches are considered Waters of the United States.

c. Project Description: This applicant proposes to construct a biotechnology research park with supporting amenities on 535 acres. The development includes the construction of the Scripps Research Institute on 183 acres of land, a 30-acre town center with commercial and multi-family residential housing, a 27-acre clinic/hospital, a 15-acre utility site, three surface water management lakes (87 acres in total), 3 acres of internal roads, 97 acres of upland hardwood forests, and 93 acres of open space. As a result of the project, approximately 21.3 acres of jurisdictional drainage ditches would be impacted. The applicant would place approximately 293,900 cubic yards of fill over 20.1 acres of ditches, and dredge approximately 39,950 cubic yards from 1.2 acres of ditches for the creation of surface water management lakes. The existing open water quarry will be expanded from its current size of 27.6 acres to 48 acres. Including the quarry expansion, approximately 59.7 acres of surface water management lakes are proposed.

d. Changes to Project: The original application included a proposal to develop approximately 414 acres, but was revised to include a total of 535 acres. The increase in acreage is a result of a surface water management pond expansion. This modification was needed to account for project fill requirements based on the site plan and is expected to complete the project without the need of off-site fill sources. Other changes were the

result of the U.S. Army Corps of Engineers (Corps) requesting the applicant provide a native, upland buffer along the eastern portion of the site to offset any adverse impacts to the off-site wetlands as a result of encroaching development.

3. Project Purpose:

a. Basic: The basic purpose of this project is commercial development.

b. Overall: The overall purpose of this project is to construct a biotechnology research park with its core supporting amenities, which includes a clinic/hospital, some additional commercial space, and some residential development in Palm Beach County, Florida.

4. Scope of Analysis: The Corps' jurisdiction includes the proposed project site and the surrounding areas where construction equipment will be staged/located. The proposed project site does not exhibit any unique or rare characteristics since the site is an active orange grove and sand mine. Historically, the project site was part of the Hungryland Slough and predominately wetland, as seen in the soils maps. The ditches were constructed in place of historic flowways to drain the site in preparation for agriculture. Thus, the ditches are considered Waters of the United States.

The Corps is aware that future development and construction activities may occur in the area if this permit is issued, such as the Palm Beach County may develop the remaining 1365-acre Mecca Farms parcel, the Town of Palm Beach Gardens may develop the adjacent property known as the Vavrus Ranch, the Department of Transportation, or the County may construct new roads to access the future additional proposed development, and Florida Power and Light may construct new power substations. The Palm Beach County has requested that the Corps evaluate the proposal to construct a 535-acre biotechnology research park independently from the remaining future development on the

1,900-acre site, as well as any future planned development in the nearby area because the biotechnology research park has independent utility from any future development. The Corps' definition of independent utility is "a test to determine what constitutes a single and complete project. A project is considered to have independent utility if it would be constructed absent the construction of the other related projects in the general area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility." 67 Fed. Reg. 2094 (January 15, 2002). The Corps believes that the Palm Beach County has shown that the 535-acre biotechnology research park development has independent utility from the remaining future development on the 1,919-acre Mecca Farms site, from the development on the Vavrus Ranch, and the construction of the future roads because the biotechnology research park could be constructed alone, without the need for the remaining development, and is not dependent on that other development for its success. In addition, no new roads would be constructed outside of the 535-acre site as a result the biotechnology research park. Any new roads would be constructed related to the other development that may or may not occur. Moreover, the development of Vavrus Ranch and the remainder of Mecca Farms are likely even if the SCRIPPS Biotechnology Park is not built. Mecca Farms is essentially upland with drainage ditches and has existing road access, thus would be a preferred site for development under the Corps regulations to other sites that would generally have some wetlands. Vavrus Ranch has substantial areas of upland and degraded wetlands and would clearly be developable under the Corps regulations. The SCRIPPS portion of the development would only need to improve an existing portion of a road, Seminole-Pratt Whitney. Therefore, the Corps has reviewed the application for the 535-acre development independently from the remaining future planned development. This application approval does not in anyway imply approval of yet to be submitted applications on adjoining properties. The remaining development and any proposed future

road construction/expansion will be evaluated and processed by the Corps under a separate application number once it is submitted.

5. Statutory Authority: Section 404 of the Clean Water Act of 1972, as amended.

6. Other Federal, State, and Local Authorizations Obtained or Required and Pending:

a. State water quality certification (WQC): The South Florida Water Management District (SFWMD) issued a conceptual permit #50-06558-P on 10 December 2004.

b. Coastal Zone Management (CZM) consistency/permit: There is no evidence or indication from the State of Florida that the project is inconsistent with the Florida CZM. Issuance of a SFWMD permit certifies that the project is consistent with the Florida CZM plan.

c. Other authorizations: The Corps is not aware of any other permits issued for this project.

7. Date of Public Notice and Summary of Comments:

a. Pre-application meeting(s): The Corps attended the pre-application meeting, which was held on 10 March 2004, for all interested agencies and parties.

b. Important dates: The Corps received the application on 13 May 2004, and conducted a jurisdictional determination on 7 June 2004. The Corps received a modification to the application on 9 June 2004, which included an increase in the acreage amount of a surface water management pond. The Corps requested additional information necessary to complete a public notice for an individual permit on 14 June 2004. The applicant responded with additional information on 9 July 2004, and the Corps considered the application complete. The Corps completed the public notice on 27 July 2004, which was published on the web on 4

August 2004. Because the site is within the range of an active woodstork colony and the mitigation will be performed within the same core foraging area for the woodstork, the Corps made a determination that the proposed work may affect, but is not likely to adversely affect the woodstork. The public notice was sent to all interested parties including appropriate State and Federal agencies.

c. Public notice comments: Since two major hurricanes affected the South Florida area during the time the public notice closed, the Corps extended the public comment time frame from 4 September 2004 to 4 October 2004. The Corps has reviewed all of the comments submitted in response to the circulation of the public notice. The Corps has summarized these comments below:

(1) U.S. Environmental Protection Agency (EPA): The EPA responded to the public notice on 13 August 2004. The EPA raised concerns with the alternative sites analysis, water storage and conveyance to the North Fork of the Loxahatchee River, prior converted wetlands, appropriate mitigation, water quality issues, the ecological benefit of the project, secondary and cumulative effects, and the development of adjacent properties.

(2) U.S. Fish and Wildlife Service (FWS): The FWS requested via email on 20 August 2004, that the Corps include a determination for the eastern indigo snake. The Corps sent a determination on 23 August 2004, via email, that the project may affect but is not likely to adversely affect the eastern indigo snake with adherence to the eastern indigo snake construction precautions. The FWS responded to the public notice on 22 September 2004. The FWS concurred with the Corps' determination that the project may affect but is not likely to adversely affect the eastern indigo snake and the woodstork. The FWS has no objections to the issuance of the permit, but recommended that the Corps coordinate overall project planning with the Everglades Restoration Program and ensure a "no net loss" wetland policy.

(3) National Marine Fisheries Service (NMFS): The NMFS, Habitat Conservation Division responded to the public notice on 10 September 2004. The NMFS is concerned with secondary and cumulative effects, further development of adjacent properties, avoidance and minimization, appropriate mitigation, prior converted wetlands, and evaluation of direct and indirect impacts as a result of the project.

(4) State Historic Preservation Officer (SHPO): The SHPO responded to the public notice on 15 October 2004. The SHPO had no concerns with the project.

(5) State and local agencies: The Corps has not received any comments from state or local agencies.

(6) Organizations: Several organizations and interested parties responded to the public notice. Many requested that a public meeting or a public hearing be held for this project. Many concerned parties also believed that the project warranted an Environmental Impact Statement (EIS). Other concerns that were raised included cumulative impacts, endangered species, historic resources, water quality, water storage, Comprehensive Everglades Restoration Program (CERP), mitigation, alternative sites analysis, single and complete project, independent utility, cost to the taxpayers, development on adjacent properties, impacts to conservation lands, rate of development in Palm Beach County, secondary and cumulative impacts, watershed analysis, water resources, water supply, water storage, and compliance with the Palm Beach County's Comprehensive Plan with Urban Development.

(7) Individuals: The issues that were raised by members of the public included requests for a public hearing or a public meeting, requests that the applicant perform an EIS, secondary impacts, cumulative impacts, direct impacts, water quality concerns, questions whether the project has independent utility, wildlife impacts, contradiction to the CERP goals, impacts to environmentally sensitive lands, water recharge,

urban development, cost of the project, political influences driving the decisions, impacts to the Wild and Scenic River, the loss of agricultural lands, terrorism, soil testing on the MECCA property, and the fast-track approach.

(8) Others Including Internal Coordination: We have received no negative comments resulting from internal coordination. The Corps has received comments from the Comprehensive Everglades Restoration Plan (CERP) representatives. The CERP acknowledged that a portion of the Mecca Farms parcel is a potential site to be either a stormwater treatment area or a reservoir within the CERP North Palm Beach County PIR. However, since the Palm Beach County agreed to set aside a flow way area that would transfer the water to the C-18 Canal, the CERP believes that the potential management measure (the "flow way") may allow a vital hydraulic conveyance to the Northwest Fork of the Loxahatchee River. Overall, the CERP program is in support of the flow way serving as a potential management measure to move water through the site because it would benefit the CERP goal. Since the SCRIPPS development would not interfere with the storage capacity of the above-ground reservoir in the northeast portion of the site, nor would it interfere with the potential for the flow way to exist, the Corps believes that this project would not be contrary to the CERP program or goals.

d. Response to the comments: A copy of the letters received in response to the public notice was provided to the applicant upon close of the comment period. The Corps informally sent the applicant a copy of the comments on 1 October 2004 and formally sent a copy of the comments and a request for additional information by letter dated 2 November 2004. The applicant responded to the federal agencies' letters on 12 October 2004 and to the Corps' formal request for additional information on 30 November 2004. The Corps was satisfied with the responses provided by the applicant. The Corps has evaluated the public comments and the applicant's responses below.

(1) In response to the EPA comments, the Corps has addressed their alternative sites analysis concerns in Section 8. The concerns with the water storage and conveyance to the North Fork of the Loxahatchee River have been satisfied by the coordination and input by the CERP. Since the Natural Resource Conservation Service has not conducted a jurisdictional determination on the property, the site has not been determined to be prior converted croplands (PCs). In general, for PCs in southeast Florida that are proposed for commercial, residential, or institutional development, the Corps is taking a consistent approach by first evaluating the PC areas to determine if they meet any of the criteria in the 87 Manual, under either Section D. (Routine Determinations) or Section F. (Atypical Situations). If we determine these areas are wetlands, then we evaluate any proposal for fill as we routinely would evaluate any wetland area. In addition, on PC land in southeast Florida, we are also receiving mitigation for unavoidable impacts to the agricultural ditches and stormwater ponds excavated in former wetlands. Upon examination, the PC areas on the Mecca Farms site were determined to be uplands as they are completely drained, as with all citrus operations, and thus would not revert to wetlands even when the agricultural activity ceased. Therefore, they are not wetlands, but rather completely drained areas that have been permanently converted to non-wetlands (uplands). Absent substantial human-induced changes, such as raising the groundwater elevation and/or construction of a flowway, we do not expect these areas would ever meet the wetland criteria described in the 87 Manual, at least not in an ecological timeframe. For mitigation, the Corps believes that the project will provide appropriate mitigation, which is discussed in Section 8c. Since the project has received water quality certification, the Corps believes that the concerns over water quality are resolved. The ecological benefit of the project would be to convert frequently disturbed, low quality active agricultural drainage ditches to stormwater ponds with littoral plantings and native planted upland buffers. The quality of the existing ecology is reflected in the low Wetland Rapid Assessment Procedure (WRAP) scores of the ditches. Secondary and cumulative effects are discussed in Section 10g, Cumulative and Secondary Impacts. Since the project has independent utility, the development of adjacent properties will be evaluated as applications are received that trigger their

review.

(2) The FWS had no objections to the issuance of the permit, but recommended that the Corps coordinate overall project planning with the Everglades Restoration Program and ensure a "no net loss" wetland policy. The Corps believes that project does not adversely impact or interfere with the goals of the Everglades Restoration Program based on the responses from the CERP and that the mitigation proposal ensures a "no net loss" of wetlands as shown in the WRAP analysis.

(3) Many of the NMFS' concerns have been addressed in the responses to the EPA's comments. The comments that have not been addressed in the EPA's response concern avoidance and minimization as well as direct and indirect impacts. The avoidance and minimization concerns are addressed in Section 8. The Corps believes that the direct impacts from constructing the SCRIPPS development are minor and include the filling of agricultural ditches. The indirect impacts are discussed below and in the secondary and cumulative impacts section, 10g.

(4) In evaluating the comments received from organizations and interested parties, many requested that a public meeting or a public hearing be held for this project. A public meeting would allow the organizations, interested parties, and members of the public another opportunity to voice the concerns. Even though many comments were received in the Corps' public notice comment period, the Corps would have the opportunity to respond to each individual participant and explain our position in person. The Corps has considered the request, but has determined that a public meeting is not necessary and is not likely to provide any new information. In addition, the Corps will provide a news release and a question-and-answer session for the media. Moreover, the public has had numerous opportunities to express its views, including in meetings that Palm Beach County has held where the public could comment. The Corps attended two of these meetings where public comment occurred. All public comment was essentially the same at those meetings as provided to the Corps in writing. The

Corps' Public Affairs Office will inform the public and interested parties of our decision through the media and on the web, and will contact the objectors of the project to allow them an opportunity to ask questions and receive feedback from the Corps. The purpose of holding a public hearing would be to evaluate any additional information that was not presented in the public comment period, which may change a permit decision. The Corps has evaluated the requests and determined that a public hearing is not necessary because additional information to that received by the Corps in writing has not been presented in the public meetings the Corps is aware of or has attended. This decision is discussed in Section 12, Public Hearing Evaluation. Many concerned parties also believed that the project warranted an Environmental Impact Statement (EIS). The Corps acknowledges that the construction of the SCRIPPS on a portion of the Mecca Farms property may encourage further development in the area. However, additional development in the area is very likely at this time either with or without the proposal to construct the biotechnology research park on the Mecca Farms parcel. The Mecca Farms parcel and the Vavrus Ranch are the two remaining privately owned parcels that are left undeveloped in the immediate area, outside of the residential parcels in the Acreage. The Corps believes that development would occur on the properties either now or in the near future, whether the SCRIPPS project is constructed on Mecca Farms or not. The Corps does not believe that an EIS is warranted for the SCRIPPS development because the applicant has proven that the project has independent utility from any possible future development on the remaining MECCA Farms parcel, the Vavrus Ranch, or any possible future road construction. Moreover, there are adequate vacant housing opportunities in existing communities, such as the Acreage, to fully support the proposed research facility. The scope of analysis does not warrant an EIS because the unavoidable impacts to low quality agricultural ditches associated with the SCRIPPS development can be mitigated, and other potential development in the area will occur with or without the SCRIPPS Biotechnology Park. The concerns with the cumulative impacts have been discussed in Section 10g. The endangered species concerns have been resolved

as reflected by the FWS' concurrence letter and are discussed in the Threatened or Endangered Species Section, 10e. The SHPO had no concerns over any historic resources. Therefore, the Corps' believes that the project would not adversely affect any historic resources. Water quality concerns have been alleviated by the issuance of water quality certification in the SFWMD permit. Because the Corps was unapprised of the location of an alternate water storage area, the Corps requested that the applicant provide a response to the question. Their response is discussed below in Section 7e, Additional Coordination. The concerns raised with consistency with the Comprehensive Everglades Restoration Program (CERP) have been answered through the response by the CERP received on 23 June 2004. The CERP had no adverse concerns with the project. Mitigation is discussed in Section 8c, and the alternative sites analysis is evaluated and discussed in Section 8, Avoidance. The Corps believes that this project is a single and complete project because it has independent utility from any future, possible development on adjacent or neighboring lands. The Palm Beach County has evaluated the cost to the taxpayers and expects an economic benefit to the area as a result of this development. The development on adjacent properties will be evaluated if and when a permit application is submitted and will be processed if it falls under the Corps' jurisdiction. The Corps has considered the impacts to conservation lands in Section 10a(1) and believes that this project would not adversely affect neighboring conservation lands. The Corps believes that the rate of development in Palm Beach County is determined by the local government. Secondary and cumulative impacts are discussed in Section 10g, Cumulative and Secondary Impacts. To answer the comment about Loxahatchee watershed and the C-18 Canal protection, the Corps has requested that the applicant provide further description of how the project would be protective on a watershed scale as well as provide additional information for protecting the C-18 Canal. The response is indicated below in Section 7e Additional Coordination. The potable water and wastewater services for the biotechnological research park will be supplied by the Palm Beach County Water Utilities Department (PBCWUD). This is discussed in Section 10a(14). The Corps

requested that the applicant provide further information on the plans for water storage. The response is discussed below in Section 7e, Additional Coordination. The Corps believes that the project is in compliance with the Palm Beach County's Comprehensive Plan with Urban Development because the Palm Beach County is the applicant.

(5) In evaluating the comments received from the members of the public, several topics have already been addressed above (the requests for a public hearing or a public meeting, requests that the applicant perform an EIS, secondary impacts, cumulative impacts, direct impacts, water quality concerns, questions whether the project has independent utility, contradiction to the CERP goals, urban development, and impacts to the Wild and Scenic River/Loxahatchee River). Therefore, responses to these concerns will not be reiterated in this section. Concerns about any possible wildlife impacts have been discussed in Section 10a(7), Fish and Wildlife. Impacts to environmentally sensitive lands have been discussed in Section 10g, Cumulative and Secondary Impacts. The issuance of the SFWMD permit alleviates any concerns the Corps may have with water recharge issues. The cost of the project is a local issue between the elected officials, the applicant, and the taxpayers. The Corps does not believe that political influences have driven the decisions on a federal level. The Corps stated on record at the pre-application meeting that we would not agree to meet the County's requested timeframe for permit issuance. The Corps has required that the project go through the proper steps and demonstrate the need for the project: avoidance, minimization, and adequate mitigation for unavoidable impacts. The Corps did recognize that the project is high profile and a decision to permit the site would be needed quickly to avoid additional cost to the taxpayers. Therefore, the Corps did agree to prioritize this project and make a decision as quickly as possible. The application review was not shortened, altered, or influenced by any outside political person or entity. The Corps has evaluated the loss of agricultural lands in Section 10a(10) Land use and Section 10a(18) Food and Fiber Production. The Corps requested that the applicant provide additional information on terrorism

and soil testing on the MECCA property, which is discussed below. As stated above concerning the fast-track approach, the Corps has properly evaluated the project and the associated impacts. Review times for the Corps, the public comments, and consultation with the agencies has not been shortened. The public comment period was extended due to the recent hurricanes that affected the local area. In the public interest, the Corps prioritized the review of this project.

e. Additional Coordination: After reviewing the comments received in response the public notice and the applicant's 12 October 2004 submittal, the Corps sent the applicant a formal copy of the comments and requested additional information on 2 November 2004 for the concerns that had not been addressed as indicated above. The Corps asked for specific responses to the public comments. The Corps asked if a Phase 1 EA has been performed on the site to determine if contamination has been found in the soils and asked that supporting information be provided. A Phase 1 and Phase 2 Environmental Site Assessment was conducted on the site in January 2004. The report recommended five areas for corrective actions and estimated the cost associated with each action. The Corps asked that the applicant provide traffic information that supports the SCRIPPS development as being independent from possible development on the remaining Mecca Farms parcel as well as possible development on the Vavrus Ranch. The County provided a copy of the Palm Beach County Resolution that approved the development for the Biotechnology Research Park. As part of the approval process, traffic studies were conducted as part of the Development of Regional Impact (DRI) approval and the Planned Industrial Park Development (PIPD) zoning approval. It was determined that additional roads would not need to be constructed as a result of the 535-acre development. This response satisfied the Corps' concerns. The Corps asked for further explanation concerning possible plans to construct a power substation in the JW Corbett State Park. The Corps also requested information concerning the power supply for the proposed development, if any new structures would need to be constructed as a result of the development, and if there were any proposed wetland impacts associated with the

structures or lines needed to construct the SCRIPPS development. The Palm Beach County does have plans to construct a power substation in the southeast corner of the J.W. Corbett Wildlife Management Area. This is the preferred alternative to supply a permanent power source for the overall development on the Mecca Farms parcel. Another alternative is to place the power substation on the Mecca Farms Parcel, which involves acquiring residential land on the east side of Seminole Pratt Whitney Road. Since the SCRIPPS development would be supplied power through an existing transmission line corridor through the Acreage (which is a separate route than the two alternatives described above), the Corps believes that the two alternatives are not connected to feasibility of the proposed project under review and should be evaluated separately from the SCRIPPS permit application. In addition, an application for activities associated with constructing the power substation on the J.W. Corbett Wildlife Management Area would be submitted by Florida Power and Light rather than the Palm Beach County. Therefore, the Corps believes that our concerns are resolved. The Corps asked for a description and design plans showing the added protective measures taken to help protect the water quality to the Loxahatchee River, as well as for alternate sites for water storage. The applicant has designed the project to improve water quality in the C-18 Canal and ultimately the Loxahatchee River by designing the water control elevations to settle pollutants in the impoundment before discharging into the C-18 Canal. Also, the existing gravity discharge structure would be modified to further restrict the discharge into the C-18 Canal. An existing weir plate will be added, and the current pump will not be used. The Corps asked for a description and designs plans showing the alternate sites for water storage. The SFWMD determined that the storage reservoir at the Mecca Farms site is not needed and that other sites provided significantly more additional storage, such as the Palm Beach County Aggregates site. The Corps requested a discussion of the measures incorporated into the project that would protect the C-18 Canal from any impacts associated with the proposed surface water management ponds. Best management practices, including silt fences and turbidity curtains will be used to protect water

quality in the C-18 Canal. A perimeter berm surrounding the 535 acres would help to prevent offsite discharges. Stormwater on site would be treated within the on-site lakes and then routed through culvert connection to the surface water management ditches which would ultimately discharge to the C-18 Canal. The existing weir will be modified to provide additional protection to the C-18 Canal. The applicant states that the project, when completed, will meet or exceed water quality standards in the C-18 Canal while the existing system does not. The Corps asked if the SCRIPPS facilities plan to include research related to terrorism or bioterrorism. The SCRIPPS Research Institute (TSRI) has traditionally not pursued funding for projects directly related to terrorism or bioterrorism. The purpose of the biotechnological research park, with TSRI as a component, is to house a cluster of related life science research and development activities by both public and private entities. The activities are intended to cure and prevent illness and disease, the development of drugs and vaccines as well as basic biochemical research. The Corps requested that the applicant indicate the responsible party for the long-term management of the mitigation area and the conservation easement, as well as provide assurances for the long-term protection of the mitigation area. The Palm Beach County will be the responsible party for the long-term management of the mitigation area and the conservation area. The Corps requested a copy of the construction and mitigation schedule and a drawing that indicates the direction in which the water flows on and off of the property. The applicant provided this information. The applicant responded to the federal agencies comment letters and submitted the requested information to the Corps on 1 December 2004. The Corps was satisfied that the applicant's response resolved our concerns.

The Corps' project manager reviewed the applicant's responses for protecting the adjacent water resources. Although the Corps' concerns were satisfied with the design plans to protect the C-18 Canal and the Loxahatchee River, the Corps needed to evaluate the impacts the project may have on the adjacent water resources (i.e., the wetlands on the Vavrus

Ranch). The Corps found the adjacent wetlands located on the Vavrus Ranch needed further evaluation to determine if secondary impacts would occur as a result from the change in land use and the SCRIPPS development. After evaluating the wetlands using the Wetland Rapid Assessment Procedure (WRAP), the Corps found that a slight impact resulted from the new development. To mitigate that loss, the Corps requested that the applicant incorporate a 50-foot minimum native upland planted buffer along the eastern border of the SCRIPPS development. This buffer would serve to protect the adjacent wetlands from encroaching development.

f. Project Revisions: As a result of Corps requesting the applicant to further evaluate indirect effects to water quality and adjacent natural wetland systems, the project has been modified to include a minimum of 50-foot native planted upland buffer along the eastern side of the subject property. Therefore, no additional coordination is required.

8. Alternatives

a. Avoidance: No less damaging alternatives were available which would have provided the same full economic utilization of the site. The minimum requirements for site selection included at least 500 developable acres to support eight million square feet of research and development buildings, fifty thousand square feet of retail, one thousand residential units, and a clinic/hospital. The first alternative considered was construction at another site. Five alternative locations were evaluated by the Palm Beach County Board of County Commissioners: a) Parcel 19, approximately 796 acres, located on Indiantown Road in Jupiter, b) Palm Beach Park of Commerce, approximately 600 acres, located off of Beeline Highway, c) Briger Tract, approximately 682 acres, located off of Central Boulevard in Palm Beach Gardens, d) Riviera Beach CRA, approximately 143 acres, located north and south of Blue Heron Boulevard, and e) Florida Crystal Site, approximately 2000

acres, located on State Road 80, west of the L-8 Canal. Eighteen factors broken into eight categories (developability, community acceptability, environmental, drainage, real estate/marketing, utilities, traffic, and cost) were considered in evaluating the site.

(1) Parcel 19 is a 796.2 acre site located west of I-95 and the Florida Turnpike, and on the north and south side of Indiantown Road in the Town of Jupiter. There are 313.3 acres north of Indiantown Road and 482.9 acres south of Indiantown Road. The Parcel 19 site was considered as a viable alternative; however, major flaws prohibited the applicant from selecting this site as the preferred location. Those flaws include the limited access from Indiantown Road, traffic issues, and cost. With the future construction of eight lanes, Indiantown Road is projected to operate at 180% of capacity, while improvements to Interstate 95 and the Florida's Turnpike overpass would be costly. Future expansion on the site is possible; however, there are environmental concerns, extensive buffer requirements, and height limitations for the buildings along the Loxahatchee River. Cost of the land is estimated at \$175,000,000, and on-site improvements are estimated at \$39,800,000. The off-site road improvements are estimated at \$75,000,000, but do not address the non-operational traffic conditions on Indiantown Road. The cost and traffic concerns alone create a fatal flaw for the site to be considered by Palm Beach County as a viable alternative. This alternative is not practicable to the applicant, nor less environmentally damaging because it has greater impacts to onsite wetlands and to the Loxahatchee River itself.

The Corps believes that adverse secondary and cumulative effects of selecting this site as the preferred alternative include potential water quality impacts to the Loxahatchee River, water and wastewater contributions, impacts and cost for improvements to the Interstate 95 and the Florida Turnpike, possible biological impacts to wetlands and listed species, population growth, and traffic. This site is in the final stages of permits for the construction of a golf course, residential and

hotel; large upland vegetative buffers along the Loxahatchee River side of the proposed project were incorporated into the site plan to help protect the portion of the River designated as a Wild and Scenic River from human disturbance impacts and water quality concerns. The SCRIPPS project would be a higher human activity use than golf course, hotel and some residential use. Any changes to the current permit process on this site would require similar measures to ensure protection. For the reasons stated above, the Corps would not prefer this site to be selected.

(2) Palm Beach Park of Commerce site is a 1,243-acre site located on the north side of Beeline Highway and east of the intersection of Seminole Pratt Whitney Road. Any discussion concerning residential housing and commercial development in this section only pertains to the residential and commercial development planned on the 535 acres of property on the Mecca Farms parcel. The Palm Beach Park of Commerce site is zoned as a "PIPD" (Planned Industrial Park District) and is approved for the development of a variety of commercial and industrial facilities. A majority of the site contains existing development; some of the tenants include the Rockefeller Group Foreign Trade Zone (which is a zone that is treated as though it were located outside the United States for customs duty purposes), a Walgreens Distribution Center, a General Motors Distribution Center, FIMCO Manufacturing, Al Moving and Storage, as well as other commercial development. This site is considered in the alternatives analysis; however, the applicant has concerns with developing this site. The site is an industrial setting and, regardless of landscaping, would result in a much different atmosphere from what is envisioned for the SCRIPPS research park. Changes in zoning would need to occur to allow residential development on the site. Much of the site is currently developed, with the majority of the existing development located in the northern and central portion of the site. The property available for development is located mainly in the southern portion of the site. The available property includes approximately 350 acres zoned for light industrial, 100 acres zoned for general industrial, and 100 acres zoned for

commercial. Even though the site contains enough available developable property to construct the biotechnological research park, the amount of property suitable for the site-specific development is limited. Areas where residential development could occur on the site are limited because the southern portion of the site falls within the airport's prohibited land use buffer area where residential use is discouraged. Thus, the southern portion would need to be reserved for the research facilities. The railroad line, which borders the southern portion of the site, would cause complications for research and development uses due to vibrations and noise. Research equipment, such as electron microscopes and other imaging equipment cannot tolerate even minimal vibration. Therefore, constructing the research development in the southern portion is also not feasible to the applicant. Because of this, some of the existing development located in the northern portion of the site would need to be relocated. Even though the land costs are reasonable, relocating the current tenants may be costly. The cost of current tenant relocation, aesthetics, vibration and noise from the railroad, and limited areas of development cause this site to be unacceptable to the applicant.

The Corps believes that adverse secondary and cumulative effects of selecting this site as the preferred alternative include urban design, land use planning, population growth, residential housing on Mecca Farms, transportation and traffic concerns, and biological impacts. Displacing the current tenants would possibly create impacts on another nearby site. In evaluating cumulative impacts of foreseeable future development, it must be considered that this site would not support the level of total future development that the County anticipates on the remainder of the Mecca parcel, whether or not the Scripps Institute is built there. To satisfy this anticipated future need and recognizing the scarcity of developable upland alternatives, this alternative would propose in the future to construct the additional residential development on the Mecca Farms parcel. To access the residential development on the Mecca Farms site from the Park of Commerce the future proposal also includes the construction of Seminole-Pratt Whitney Road from the Beeline

Highway to the existing portion of Seminole-Pratt Whitney Road. The construction of Seminole Pratt Whitney Road would impact biological resources, wetlands, and the wildlife corridor by bisecting the preserved lands and creating a dangerous obstruction to wildlife movement. Anticipated additional residential development on the Mecca Farms parcel would cause the secondary and cumulative effects to occur as discussed with the development of the Mecca Farms site in addition to the secondary and cumulative effects of developing the project on the Park of Commerce site. The Corps also believes that many of the adverse comments and concerns received as a result of development on Mecca would continue to be raised with the Palm Beach Park of Commerce site because residential development would also be proposed on the Mecca Farms site. Additional development opportunities for spin-off development would potentially occur at United Technologies/Pratt Whitney, which is located immediately west across the Beeline Highway from the Park of Commerce site. Therefore, the Corps is not in favor of the applicant selecting this site as the preferred alternative due to the compounded cumulative impacts associated with constructing the biotechnological research park on the Palm Beach Park of Commerce site and the residential development on the Mecca Farms site, the impacts associated with constructing Seminole-Pratt Whitney Road, additional development on Beeline Highway, and potential impacts associated with displacing the current tenants.

(3) The Briger Parcel is 682.63 acres of land and is located in the City of Palm Beach Gardens, south of Donald Ross Road, north of Hood Road, and east of the Florida Turnpike. Any discussion concerning residential housing and commercial development in this section only pertains to the residential and commercial development planned on the 535 acres of property on the Mecca Farms parcel. There are 475.69 acres located east of I-95 and 206.94 acres located west of I-95. The site contains approximately 53.68 acres of wetlands, and 628.95 acres of uplands. Even with approximately 133 acres of uplands reserved for preservation as the Palm Beach County code requires, the site could support the biotechnological research park. However,

the applicant would not prefer to construct the biotechnological research park on this site because of several issues. Land costs are a major issue, which are estimated at \$187,550,000. Because I-95 intersects the parcel, the total planned development would be divided into two separate areas, presumably with the residential development on one side of I-95, and the commercial development on the other side. The applicant would need to construct a bridge over I-95 to connect the two parcels, which would increase the cost associated with the project. Also, since the Briger Parcel would directly impact freshwater wetlands, the mitigation for those impacts would likely be more than mitigation required for impacting drainage ditches. Secondary and cumulative effects include possible traffic and road improvements, expansion of the water and wastewater treatment plant, and limited possible future expansion areas. These issues, i.e., costs associated with land purchase, division of development, costs to achieve connect-ability, and mitigation costs, make this site undesirable to the applicant.

The Corps believes that adverse secondary and cumulative effects of selecting this site as the preferred alternative include increase in traffic, removal of native wetlands and forested uplands that are in communication with nearby undeveloped areas, induced growth, potential for increase in development on private parcels, utilities with the expansion of the required water and wastewater treatment plant expansions, and biological impacts. With an increase in traffic, possible future plans for the area may include expansion of nearby roads. Because 130 acres of uplands would need to be preserved as required by the Palm Beach County codes, many of the wetlands on the site would need to be impacted to achieve the designs for construction on 535 acres of land. Although many of the wetlands on the site are highly degraded with lack of hydrology and invasion of exotic plant species, construction on this site would directly impact native wetlands and forested uplands. Removing the native wetland and forested uplands from this area would have an adverse effect on the adjacent native land to the south of the site, as well as the Loxahatchee Slough located to the west. Northern Palm Beach County has very few large tracts of privately owned land

available for development. The removal of one has adverse effects on the remaining tracts because less land is available for wildlife communication and connection. Development on the Briger parcel would increase development on nearby residential and commercial areas, including the Vavrus Ranch and Mecca Farms parcel. It must also be noted that Palm Beach County attempted to purchase this site for preservation as environmentally sensitive lands; however, the cost was too high.

Much of the infrastructure elements that are proposed on Mecca Farms (commercial development, restaurants, residential, university, I-95 interchange) already exist along Donald Ross and the immediate area. Many of those accommodations would not need to be constructed if development were to occur on Briger. Also, the wetlands in and around Briger are already bounded by development on all sides, intersected by I-95, and impacted by two well fields. The hydrology has been severely altered on the site, which has caused the wetlands to become degraded and overtaken with exotic species. Portions of the historic wetlands no longer meet the Corps' definition of a wetland under the Corps' 1987 Wetland Delineation Manual. If this site were selected, minor secondary and cumulative impacts would occur, however, native wetlands (although degraded) would be impacted.

(4) The Riviera Beach CRA contains approximately 800 acres located along the eastern edge of the City of Riviera Beach from Silver Beach Road on the north to the Port of Palm Beach to the south. The site has been evaluated as a potential site but determined to not be a viable option due to the lack of developable land, costs associated with relocating U.S. Highway 1, unconnected development of research buildings, potentially contaminated soils, schedules, and right-of-way issues.

The Corps has evaluated secondary and cumulative impacts associated with this site. Socioeconomic factors, stormwater and water quality treatment, impacts to Lake Worth, expansion areas, and traffic concerns would result if this site were selected for the development.

(5) Florida Crystals Site is approximately 2000 acres located on the west side of the L-8 Levee, north of State Road 80. The land is currently in agricultural use and is zoned for Special Agricultural and Agricultural Production. Due to the site's location, the applicant has taken this alternative out of consideration. Commercial and residential development on this site would threaten the agricultural production in the area where no development at any intensity is currently allowed. This would also open the western, agricultural area for development. The uncertainty and time associated with permitting this site for the proposed development is risky to the applicant.

The Corps has evaluated secondary and cumulative impacts associated with this site. Expansion of development into agricultural resources, roadway expansions, increase in associated development, impacts to the CERP, water flow alterations, utilities, land use planning, urban design, and environmental concerns would occur if this site were selected for development.

(6) Mecca Farms site is a viable alternative. It is currently used as a productive citrus grove and an active sand mine. Development of the site would cause impacts to drainage ditches. Land may be available on the remaining Mecca Farms parcel for future expansion; however, permitting the future development will be required. Access to the site can occur from existing roads. The cost per acre is \$30,000, which is reasonable to the applicant. Although in citrus production, the site is not in the agricultural reserve.

The Corps has evaluated secondary and cumulative effects associated with developing this site. The Corps believes that adverse secondary and cumulative effects of selecting this site as the preferred alternative include increase in traffic, induced growth, potential for increase in development on private parcels, utilities, and roadway expansions. Further secondary and cumulative impacts for this alternative have been discussed in Section 9, Section 404(b)(1) Guidelines Evaluation and in

Section 10g, Cumulative and Secondary Impacts.

Two alternatives appear to be practicable to the applicant: the Briger Tract and the Mecca Farms parcel. However, the Briger site is clearly more expensive, and the applicant has stated that it is not practicable. Moreover, in comparing the adverse effects of developing each site, the Corps believes that there is an overall insignificant difference in the impacts to the aquatic environment. Direct effects: In general, direct impacts to agricultural ditches cause less environmental impacts to the aquatic environment than direct impacts to natural wetland systems. Although a WRAP was not performed to quantify the value of the wetlands on the Briger tract, a site visit indicated that the wetlands on the Briger tract are low in quality. The hydrology has been severely altered on the site, which has caused the wetlands to become degraded and overtaken with exotic species. Portions of the historic wetlands no longer meet the Corps' definition of a wetland under the Corps' 1987 Wetland Delineation Manual. The wetlands in and around Briger are bounded by development, intersected by I-95, and are experiencing hydrological impacts from two nearby well fields. These conditions adversely affect wildlife utilization and interaction with the wetlands. The majority of the aquatic species utilizing the site are avian. Direct impacts at the Mecca Parcel are to drainage ditches with a low function and value due to side slopes, periodic maintenance, and water quality. The wildlife species that utilize the ditches include avian, reptile, and fish. By choosing the Mecca Farms parcel over the Briger site, the applicant has demonstrated avoidance and minimization of wetland impacts by choosing a location with impacts to agricultural ditches. However, with such a low function and value of the wetlands on the Briger tract, the Corps believes that there is an insignificant difference in the direct impacts to the agricultural ditches found on Mecca Farms and the wetlands found on the Briger tract. Indirect effects: Even though there is very little wildlife and hydrologic connection on the Briger tract, complete development would remove the wildlife association with the adjacent undeveloped land to the south and eliminate any hydrologic connection the

site has to the south and the west. The Mecca Farms parcel is an active orange grove with very little wildlife utilization. The wildlife typically utilizes the J.W. Corbett Wildlife Management Area, Unit 11, Vavrus Ranch, and the Loxahatchee Slough. There is little need for wildlife to travel through the orange grove since the preserved, undeveloped lands exist to the west, north, and east of the Mecca Farms Parcel. The Mecca Farms site with the incorporation of vegetative upland buffers, has minimized impacts to the adjacent off-site wetlands. Therefore, there is an insignificant difference in the adverse impacts to off-site wildlife utilization between the two sites since both sites are not heavily utilized by wildlife due to their location. Secondary and cumulative: When the secondary and cumulative effects are analyzed between the Mecca Farms and the Briger Tract, the difference is insignificant. Much of the infrastructure elements that are proposed on Mecca (commercial development, restaurants, residential, university, I-95 interchange) already exist along Donald Ross. Therefore, spin-off development is predicted to occur in the remaining undeveloped areas not currently under preservation. This includes development on Mecca Farms and the Vavrus Ranch. On the same note, development on the Mecca Farms site would also encourage development on the Briger tract. These two parcels are close in proximity, within the same commuting range, and subject to the same pressures for development in northern Palm Beach County. If the biotechnological research park development were to occur on the Mecca Farms site, the increase in development on the available private lands, including Vavrus Ranch, would occur because of the development pressures. The rate of development would occur at a slightly faster rate than if built on Briger for the simple fact of location. However, the rate is expected to be insignificant due to the intense development pressures. This development pressure makes it extremely difficult to quantify the rate. As stated above, development on private lands, such as Vavrus is a potential adverse cumulative impact for both sites. The Loxahatchee River Basin Wetland Planning Project for Palm Beach County dated 1 July 1999, states that the Vavrus Ranch is one of the largest areas containing wetlands that have not been protected. The

Palm Beach County has identified portions of the property as areas desirable to purchase for conservation and recreational uses. The areas for conservation, presumably would be located in areas to protect the C-18 Canal and the Loxahatchee Slough. In the same note, the portions of the property not purchased for conservation would be suitable for development. The applicant's preferred alternative is the Mecca Farms site. With the insignificant difference in the adverse indirect, secondary, and cumulative impacts between the Mecca Farms site and the Briger tract, the Corps defers to the applicant's site selection.

b. Minimization: The proposed site, which is the Mecca Farms parcel, consists of orange groves with drainage ditches. Due to the poor quality, the spacing of the drainage ditches, and the number of drainage ditches on the site, avoidance of the surface water ditches is not a viable consideration. Selection of an alternate site would result in greater impacts to waters of the United States or to special aquatic sites because the Mecca Farms site has been previously impacted with agricultural and mining activities and would impact agricultural ditches rather than freshwater wetlands. Improvements to the water treatment before discharging into the C-18 Canal would also be beneficial to the water quality in the C-18 Canal as well as the Loxahatchee River.

c. Mitigation: The jurisdictional ditches are primarily open water ditches with a steep side-slope and a narrow fringe of exotic vegetation. Typically, open water ditches could be replaced with stormwater management ponds because the function and value of the open water is replaced. Because many of the ditches on the Mecca Farms parcel were historically excavated through wetlands, wetland compensation is needed. Therefore, the Corps would not allow the creation of stormwater ponds as the sole element for compensatory mitigation to offset the function and value of the ditches. Rather, the Corps will replace the function and value of the impacted ditches with a combination of littoral plantings, open water, and upland plantings.

The applicant proposes compensatory mitigation for 21.3 acres of

unavoidable adverse impacts to jurisdictional drainage ditches as the creation of ± 40.4 acres of stormwater management ponds (a ± 20.4 -acre lake expansion at the existing 27.6-acre mining quarry and new ± 20 -acre lake), approximately 6.3 acres of littoral marsh plantings, approximately 1.1 acres of forested wetland plantings, a minimum of 150-foot native planted upland buffer located between the existing Acreage development and the stormwater management pond, and a minimum of 50-foot native planted upland buffer between the proposed development and the Vavrus Ranch property. The upland preserve areas total approximately 17.5 acres.

The impact and proposed mitigation sites were evaluated using the Wetland Rapid Assessment Procedure (WRAP). A WRAP score of 0.38 was calculated for the ditches, resulting in 8.1 debits for the proposed impacts. The littoral areas located on the western side of the site (approximately 1.9 acres) were projected to provide a post-project WRAP of 0.67, while the littoral areas located on the southern side of the site were projected to provide a post-project WRAP of 0.68. Considering a 2-year time lag and 10 percent risk of failure, the littoral shelf mitigation areas provide 1.13 and 3.31 credits, respectively. Secondary effects were evaluated for the off-site wetlands located on the Vavrus Ranch. Construction of the project would result in a delta of -0.05 to the adjacent wetlands. To offset this loss, the Corps requested that the applicant provide a buffer between the offsite wetlands and the development. The applicant offered to preserve a minimum of 50-foot native, upland planted natural area to serve as a wildlife corridor as well as a serve to buffer the offsite wetlands. This is intended to offset the loss of function and value of the off-site wetlands from the changing use. The Corps did not use WRAP to directly assess the 150-foot upland preserve area. This preserve area was considered in evaluating the littoral areas because it provides a corridor, upland buffer, and dry detention for water quality. The Corps also did not use the WRAP to evaluate the open water areas for mitigation credits as these areas are being constructed for surface water management purposes. The Corps recognizes the open water areas will

provide some function and value. As well a percentage of the impact site is open water habitat. The Corps believes that the open water habitat created through the stormwater management system will provide enough function and value to offset the remaining 3.66 debits from filling of the jurisdictional ditches. Therefore, the Corps believes that the loss of 21.3 acres of drainage ditches is offset through the creation of ± 40.4 acres of stormwater ponds, planting of approximately 6.3 acres of littoral marsh, planting of approximately 1.1 acres of forested wetland, and the creation, enhancement, and the preservation of 17.5 acres of upland buffers. This proposal will replace the function and value of the existing jurisdictional areas.

The mitigation has been computed as follows using the WRAP evaluation:

Polygon	existing WRAP	with project WRAP	Delta	Functional Capacity Units FCU's	2 year Time lag (0.9833) 10% Risk
Ditches	0.38	0	-0.38	-8.1	-8.1
Littoral-S	0	0.68	+0.68	3.74	3.31
Littoral-W	0	0.67	+0.67	1.27	1.13
Stormwater pond					3.66
Upland buffers					
Vavrus wetlands	0.77	0.72	-0.05		
Total					0

d. Project As Proposed: The project as proposed does not adversely impact waters of the United States because the function and value will be replaced through the mitigation plan.

e. Conclusions of Alternatives Analysis: Review of the

project concludes that avoidance and minimization of impacts to waters of the United States was utilized to the most practicable extent. The mitigation off sets the wetland impacts, and therefore, no net loss of wetland function is anticipated. The project as proposed with the mitigation proposal represents the least environmentally damaging practicable alternative.

9. Section 404(b)(1) Guidelines Evaluation:

a. Factual Determinations (230.11):

(1) Physical Substrate (230.11(a)):

a. Physical Compatibility: The Soil Survey of Palm Beach County describes the soils on the project site as being Riveria Sand, Riveria Sand Depressional, Hallandale Sand, Boca Fine Sand, Floridana Fine Sand, and Wabasso Fine Sand before agricultural use. Currently, the site contains fill material to support the citrus and mining operations. Sands, limestones, and shelly sandstone/cemented sands of the Anastasia Formation underlie the site.

b. Extent of substrate changes: To develop the site, the surface organics (grasses/weeds) will be removed, stockpiled, and used as fill material for landscape berms. The vegetation would be removed and the site grades would be raised to assure that building foundations and roadways are constructed above potential flooding elevations. Clean fill material would be used to achieve the required grades. The fill material is expected to be from on-site sources, so the substrate should not be expected to change extensively from existing conditions.

c. Changes in bottom contours: The existing ground elevation varies at the site from approximately 24.0 feet NVGD to 20.5 feet NVGD. The bottom contours proposed in the surface water management lakes are set at -10.8, will rise to elevation 15.5 and then be constructed at a 10:1 slope until break elevation of 16.0. Littoral wetlands plant species will be planted in this area, approximately 35 feet in width. The pond would rise at a 4:1

slope to a top of bank elevation of 21 NVGD. Wetland plant species will be planted in this area, which is approximately 10.8-feet in width. The lake maintenance easement area, approximately 20 feet in width will slope to match the existing ground elevation at 21.1 NVGD. Other areas are similar. The slight differences could be found in the attached permit drawings, pages 8 through 15.

(2) Water Circulation, Fluctuation, and Salinity
(230.11(b)):

a. Current patterns and Circulation: The current water flow has been designed to flow north or south from the existing road towards a major canal that runs east to west. From any east-west road, the northern ditches allow water to flow to the north into a major canal running east-to-west. The southern ditches allow water to flow south into the major canal running east-to-west. All east-to-west canals transport water to the center of the site, where it travels north within a major north-to-south oriented canal. The site is freshwater so salinity is not applicable.

b. Municipal and private water supplies: The potable water supply would be provided from off-site by the Palm Beach County Water Utilities Department. Irrigation will be withdrawn from the on-site lakes, with recharge from the C-18 Canal as needed. The consumptive water use permit has been issued to supply the irrigation demands from the C-18 Canal.

(3) Suspended Particulate/Turbidity (230.11(c)):

a. Turbidity control: Erosion and sediment controls, including stabilization and structural practices, will be utilized on the site during all construction activities. Stabilization practices include temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, and preservation of mature native vegetation. Structural practices include silt fencing, earth dikes, diversions, swales, sediment protection, rock outlet protection,

reinforced soil retaining systems, gabions, and temporary or permanent basins. Stormwater management controls, which include best management practices and velocity dissipation devices, will be utilized on site. Best management practices include stormwater detention and retention systems, open vegetated swale flow attenuation, infiltration of runoff onsite and combined practice sequential systems. Other potential pollutant controls include waste disposal, off-site vehicle tracking, compliance with state and/or local wastewater, sanitary sewer or septic system regulation and limited application, generation, and migration of toxic substances.

b. Duration of turbidity: Turbidity is expected to occur during the construction phase of the project. The measures incorporated above would minimize any water quality impacts.

(4) Contaminant Availability (230.11(d)):

a. Physical characteristics: The site is an active orange grove with a sand mining operation. A Phase 1 and Phase 2 EA was performed on the entire 1919-acre Mecca Farms site. The Phase 1 analysis identified 25 areas of potential environmental concern based on historical and current activities. The Phase 2 assessment identified five areas where corrective actions should occur as a result from soil and groundwater samples: a burn area, a former shed/staging area, the maintenance shop, refueling area, and the irrigation pump stations.

b. Hydrology in relation to known or anticipated sources of contaminants: The existing groundwater levels are managed and controlled through the surface water ditches. The water table has been measured to vary between 4 to 5 feet below land surface during the Phase 2 Environmental Site Assessment. Several areas within the quarry, staging area, maintenance area, and citrus grove area were tested for soil and groundwater contamination. Out of all of the areas and samples taken, one sample in the former shed area exhibited cadmium slightly above the groundwater cleanup target level.

c. Previous testing: Testing was conducted during the Phase 2 Environmental Site Assessment.

d. Known sources of contaminated upland runoff: The report did not have any records of known sources of contaminated upland runoff.

e. Records of petroleum or hazardous substance spills: The report did not indicate if any spills occurred on the site. However, the analytical results indicated dark soil staining and a strong used oil odor from a soil sample under the maintenance shop bay area. The groundwater results were not above the groundwater cleanup target level at this area.

(5) Aquatic Ecosystem Effects (230.11(e)):

a. Structure of ecosystem: The site contains an active open-water quarry and drainage ditches with nuisance or exotic plant species along the littoral fringe of the ditches. The site is used by a limited amount of wildlife (turtles, alligators, and birds). The remaining of the site contains orange trees.

b. Ecosystem functions: The ecosystem has little function and value as an aquatic ecosystem because of the frequent human disturbance, routine maintenance of vegetation within the ditches, maintenance of the orange groves, and disturbed aquatic environment. The site does not display natural habitats or ecosystems as found in the surrounding areas.

c. Threatened or endangered species: An environmental assessment (EA) was conducted on the site in April 2004. It found that the site does not contain any federally listed threatened, endangered species, or species of special concern. The drainage ditches did not appear to be suitable habitat due to the side slopes and human disturbance. Even though the report did not find any listed animal species, it did state that the potential exists for a listed species, the American alligator, to utilize the site. The Corps has completed consultation with the FWS pursuant to Section 7 of the Endangered Species Act. It has been determined that the project would not adversely affect any listed federally

listed species.

d. Special aquatic sites: The site does not contain any special aquatic sites, other than the low ecological value wetland fringes along the ditches.

e. Wildlife: The wildlife observed on the site was limited but included reptiles and birds in the ditches and egrets perched along the north side of the quarry. Compensatory habitat for wildlife will be provided through the mitigation proposal.

(6) Proposed Disposal Site (230.11(f)): The existing citrus trees would need to be cleared and grubbed. The root balls and tree stumps would be excavated and disposed. Disposal consists of grinding/shredding of the trees and stumps and either offsite disposal at an approved designated area and/or stockpiling and drying the material onsite and burning with the approved permits. The project would not dispose of any fill material offsite. All fill material needed on the site will be excavated as a result of the creation of the stormwater management ponds.

(7) Cumulative Effects (230.11(g)):

a. Other similar projects (historical) in the area/watershed: There are limited other similar projects in the immediate area because there are limited other agricultural lands in the area. Such other large open land in the area is generally either publically owned or subject to similar development pressure. The Vavrus Ranch does contain areas that are used for agricultural purposes. However, development is not proposed on that site at this time. The Corps is currently processing an application for a development on a portion of an orange grove that is located west of the Acreage and south of J.W. Corbett Wildlife Management Area. The property was formerly known as Indian Trails Groves. The Corps is claiming the on-site ditches and any impacts to wetlands that have not been previously filled during agricultural operations. The Corps also has permitted other development on property used as orange groves in Palm Beach County as well as in the South Florida area. The Corps is currently evaluating a project submitted by the Department of Veterans

Affairs to construct a national veterans cemetery in Palm Beach County. The Corps requested the applicant provide a detailed analysis of why an agricultural site, which was considered in the alternatives analysis, was not selected as the preferred alternative. The agricultural site contained less proposed wetland impacts than the preferred alternative site.

b. Anticipated similar projects in area/watershed: The Corps believes that similar development may be proposed on the remaining Mecca Farms parcel as well as the adjacent Vavrus Ranch property. These parcels are the last remaining undeveloped privately owned parcels in the area, with the exception of the single-family residences located to the south of the Mecca Farms site. Further development may occur on the Indian Trail Groves site as well.

c. Anticipated future consequences: This project may entice further proposed development on the remaining Mecca Farms site or the adjacent Vavrus site. However, this project has independent utility from the future proposed sites. Once permit applications are submitted for future proposed projects, the Corps will have the ability to evaluate those projects. Moreover, development pressure is intense in northern Palm Beach County, and it is likely that the remainder of Mecca Farms and portions if not all of Vavrus Ranch will be subject to proposed residential and commercial development. This development pressure is expected in the same time horizon, the next few years, whether or not the SCRIPPS Biotechnology Park is constructed on Mecca Farms.

(8) Secondary Effects (230.11(h)): Because the site has been previously filled during agricultural practices, the Corps does not expect further leaching to occur as a result of fill to construct the SCRIPPS development. Surface water runoff is expected to be minimal due to the turbidity control measures and best management practices incorporated into the project. Hydroperiod changes are also expected to be minimal since the impacts are to surface water drainage ditches. Secondary effects on adjacent natural systems have been eliminated due to the establishment of an upland buffer between the development and the

offsite wetland areas. The proposed project allows for a wide shallow flowway along the western edge of the Mecca Farms site for future use moving water north to C-18 and the Loxahatchee Slough.

b. Restrictions on discharges:

(1) Alternatives (See paragraph 8):

(a) The activity is located in a special aquatic site (wetlands, sanctuaries and refuges, mudflats, vegetated shallows, coral reefs, riffle and pool complexes, etc.)

yes(X) no() (low value wetland fringes on ditches)

(b) The activity needs to be located in a special aquatic site to fulfill its basic purpose. yes() no(X)

(c) It has been demonstrated in paragraph 8 above that there are no practicable nor less damaging alternatives which would satisfy the project's overall purpose. yes(X) no()

(d) The least damaging alternative has no other significant environmental effects. yes(X) no()

(2) Other program requirements:

(a) The proposed activity violates applicable State water quality standards or Section 307 prohibitions or effluent standards. yes() no(X)

(b) The proposed activity jeopardizes the continued existence of federally listed threatened or endangered species or affects their critical habitat. yes() no(X)

(c) The proposed activity violates the requirements of a federally designated marine sanctuary. yes() no(X)

(3) The activity will cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of

aquatic organisms; ecosystem diversity, productivity and stability; and recreational, esthetic, and economic values.

yes() no(**X**)

(4) Minimization of adverse effects:

(a) Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem. yes(**X**) no()

(b) Compensatory mitigation: The applicant proposes compensatory mitigation for unavoidable adverse impacts to 21.3 acres of ditches through the creation of ±40.4 acres of stormwater management ponds (a ±20.4-acre lake expansion at the existing 27.6-acre mining quarry and new ±20-acre lake), approximately 6.3 acres of littoral marsh plantings, approximately 1.1 acres of forested wetland plantings, a minimum of 150-foot native planted upland buffer located between the existing Acreage development and the stormwater management pond, and a minimum of 50-foot native planted upland buffer between the proposed development and the Vavrus Ranch property. Therefore, the applicant's proposal would replace the existing functional value.

c. Findings: The Corps reviewed the proposed project in accordance with the 404 (b)(1) Guidelines. The review demonstrates that the Corps analyzed all of the alternatives and that the proposed alternative is the least environmentally damaging and practicable alternative considering expense, public need, existing technology, logistics, and the site selection process. The project complies with the Guidelines because the project would not cause or contribute to violations of State Water quality standards, jeopardize the existence of any endangered species or affect a marine sanctuary. The Corps does not expect significant degradation and the applicant has taken all available practicable steps to minimize impacts. The Corps has added these special conditions to the permit to ensure that significant degradation does not occur.

(1) Fill material used with this project shall be limited to suitable, clean fill material, which excludes materials such as trash, debris, car bodies, asphalt, construction materials, concrete block with exposed reinforcement bars, and any soils contaminated with any toxic substance in toxic amounts (see Section 307 of the Clean Water Act).

(2) Reduction and/or elimination of turbid water conditions in adjacent waterbodies are to be achieved through the use of silt curtains or screens in the construction during periods of fill placement.

(3) Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date.

(4) Within one year of the date of this permit, the permittee shall plant the surface water management ponds with wetland plant species in the 12-foot littoral shelf (approximately 6.6 acres). The littoral shelves shall be maintained with coverage of at least 80% native wetland plant species and with less than 5% nuisance plant species and less than 1% exotic plant species in perpetuity. The planting shall be conducted in accordance with the mitigation plan submitted to the Corps dated 9 December 2004.

(5) Within one year of the date of this permit, the permittee shall plant native upland plant species within the minimum 50-foot native upland buffer located on the eastern border of the site adjacent to the Vavrus Ranch and the 150-foot native upland buffer located on the southern border of the site between the stormwater pond and the Acreage development. The upland buffers shall be maintained with coverage of at least 80% native upland plant species and with less than 5% nuisance plant species and less than 1% exotic plant species in perpetuity. The planting shall be conducted in accordance with the

mitigation plan submitted to the Corps dated 9 December 2004.

(6) The permittee shall subsequently submit annual monitoring reports for a period of five years, the first no later than one year after the submission of the initial report. Each monitoring report shall provide a narrative, professional biological opinion of the condition of the conservation area, a plan view describing the vegetative community, a list of species and their percent cover for each community, the percent cover of wetland and of exotic plant species, the sum of the survivors of those planted plus those recruited, a description of any unusual climatic or other factors, and panoramic photos from the same points as where the photos for the initial report.

(7) The mitigation areas shall be considered successful when all of the following criteria are met: the canopy of native wetland plant species reaches 80 percent cover (that is, the sum of the survivors of those planted plus those recruited); the number of individual plants per unit area (the sum of survivors of those planted plus those recruited) equals 80% of the number of individuals planted; the vegetation, planted or existing, must show evidence of normal growth and reproduction, and the attached WRAP scores are achieved within two years from the date of permit issuance. If the wetland mitigation areas have not reached the projected WRAP scores at the end of the second year of monitoring, the Corps will determine if the "with-project" WRAP scores can be achieved with additional planting, excavation, monitoring, changes in control elevations, and/or other actions to achieve these scores. If the Corps determines the projected WRAP scores cannot be achieved, the permittee will be required to provide additional mitigation.

(8) The preserved areas, comprising of the 6.6 acres of littoral areas, the minimum 50-foot native upland buffer located on the eastern border of the site, and the 150-foot native upland buffer located on the southern border of the site shall be placed under a conservation easement. Within one year from the date of permit issuance, the permittee will have a legally sufficient conservation easement prepared to ensure that the

wetland areas will remain in their natural state in perpetuity. The conservation easement will encompass the 6.6 acres of littoral areas. These natural preserve areas will not be disturbed by any dredging, filling, land clearing, agricultural activities, planting, or other construction work whatsoever. The permittee agrees that the only future utilization of the preserved areas in question will be as a purely natural area.

The permittee will prepare the proposed conservation easement, including a legal description, survey, and scale drawings, of the area in question and furnish the same to the Jacksonville District Office of Counsel, c/o the Regulatory Division, Enforcement Section, Post Office Box 4970, Jacksonville, Florida 32232-0019, for legal review and approval.

(9) Within 30 days of U.S. Army Corps of Engineers' approval of the proposed easement, the permittee will record the easement in the public records of Palm Beach County, Florida. A certified copy of the recorded document, plat, and verification of acceptance from the grantee will be forwarded to the Jacksonville District Office. The recordation and notification to the District Office must occur prior to the discharge of any additional fill authorized under this permit.

(10) The permittee must show that it has clear title to the real property and can legally place it under a conservation easement. Along with the submittal of the draft conservation easement, the Permittee shall submit a title insurance commitment for the property, which is being offered for preservation. Any existing liens or encumbrances on the property must be subordinated to the conservation easement. At the time of recordation of the conservation easement, a title insurance policy must be provided to the Corps in an amount equal to the current market value of the property.

(11) In the event the permit is transferred, proof of delivery of a copy of the recorded conservation easement to the subsequent permittee or permittees must be submitted to the Corps together with the notification of permit transfer.

(12) Grantee shall not assign its rights or obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state and federal laws, including §704.06 Florida Statutes, and committed to holding this conservation easement exclusively for conservation purposes. The Corps shall be notified in writing of any intention to reassign the conservation easement to a new grantee and must approve the selection of the grantee. The new grantee must accept the assignment in writing and a copy of this acceptance delivered to the Corps. The conservation easement must then be re-recorded and indexed in the same manner as any other instrument affecting title to real property and a copy of the recorded conservation easement furnished to the Corps.

(13) The permittee shall comply with the attached Eastern Indigo Snake Construction Precautions.

(14) Within 90 days of permit issuance, the permittee shall restrict the discharge to the C-18 Canal through the modification of the existing gravity discharge structure from the impoundment to the C-18 Canal. The permittee shall install an additional weir plate and remove the pump that currently discharges from the ditches directly into the C-18.

(15) Within 60 days of the authorized work and completion of the mitigation, the attached Self-Certification Statement of Compliance must be completed and submitted to the Corps. Mail the completed form to the Regulatory Division, Enforcement Section, Post Office 4970, Jacksonville, Florida 32232-0019.

10. Public interest review:

a. Public interest factors: The Corps reviewed all of the public interest factors. The Corps considers the public interest factors identified below as relevant to this proposal. The Corps considered both cumulative and secondary impacts on these public interest factors.

(1) Conservation: On the subject site, the applicant will remove exotics, plant wetland plant species, provide maintenance, and place 6.6 acres of littoral shelves under a conservation easement. The native upland buffer areas will also be placed under a conservation easement. Secondary impacts pertaining to the on-site conservation areas not expected to be adverse because they pertain to littoral areas surrounding a surface water management pond. Best management practices will be used during construction.

(2) Economics: The project would create an increase in jobs for all aspects of construction (land clearing, masonry, roofers, nurseries, etc.) for the immediate on-site construction needs. The overall development of the site with the SCRIPPS research biotechnological park would be a considerable economic benefit to the area. The SCRIPPS research park is estimated to accommodate approximately 18,000 jobs on the site. An increase in available jobs, greater educational opportunities, and more health care facilities would encourage economic growth in the area. As signed by Governor Jeb Bush, this project was expedited by the State based on an economic benefit to the area. The economic disadvantage would be less production of agriculture (i.e., orange groves) and less sand excavated. Since the orange groves and sand mine consist of approximately 1,919 acres in total, approximately 28% of the total production would not be used for agricultural purposes under this permit decision.

(3) Aesthetics: As the site is currently an orange grove and sand mine, construction of a research park may be more aesthetic to the area, based on the Corps' opinion. Surface water would be contained in the management ponds, which have been designed to include a large amount of wetland plantings, including cypress and bay islands. The SCRIPPS development would have active orange groves on almost three sides, with a surface water management pond located to the south. The pond and littoral plantings (including bays and cypress trees) would serve to buffer the residential development from the SCRIPPS development, as well as provide an appealing view. The

applicant has also agreed to preserve a minimum of 150-foot vegetated buffer located between the stormwater pond and the development in the Acreage. This buffer would be native planted, upland area with a recreational trail. Undeveloped private land (the Vavrus Ranch) exists to the east. Since the site is not developed, the aesthetics would not be an issue. However, the applicant is preserving and planting a 50-foot native upland buffer adjacent to the Vavrus Ranch. For cumulative effects, the aesthetics would be similar to the secondary effects since no permit decisions have been made to allow further development to occur on the remaining Mecca Farms parcel or the Vavrus Ranch. If development were allowed to continue on the adjacent private property, those areas would appear to look as the other developed areas in Palm Beach County.

(4) General environmental concerns: There are no outstanding general environmental concerns that have not been addressed.

(5) Wetlands: Only low ecological value wetland fringes on the ditches would be impacted as a result of the project. Impacts are to surface water ditches only. However, secondary effects on the wetlands adjacent to the site on the Vavrus Ranch have been assessed and calculated using the WRAP method. A WRAP score of 0.77 has been assessed for the wetland located southeast of the site. This accounts for existing conditions, with the wetland being located adjacent to the orange groves. With the project being constructed as proposed, the wetland has a WRAP of 0.72. The loss accounts for the decrease in wildlife utilization and the decrease in buffer resulting from a disconnection to wildlife corridors. To offset this loss in function and value, the Corps has requested that the applicant provide a minimum 50-foot, native, upland planted, wildlife corridor to serve as a buffer to the adjacent wetlands on the Vavrus site.

(6) Historic and cultural resources: The SHPO responded to the public notice on 15 October 2004, stating that there are

no concerns with the project. The Corps is unaware of any secondary or cumulative impacts this project may have on historic and cultural resources.

(7) Fish and wildlife values: Secondary impacts to fish and wildlife values include displacement of the wildlife during construction. During the construction phase of the project, the fish and wildlife species would theoretically move to the ditches that are not being impacted. Once the stormwater ponds are constructed, fish, aquatic invertebrates, and other wildlife are anticipated to utilize the ponds. A temporal lag is anticipated and accounted for in the WRAP analysis. To offset secondary impacts to fish and wildlife utilizing adjacent wetlands, a native upland buffer has been incorporated into the project to allow a wildlife corridor to remain to the northern and western adjacent properties. The northern property, although is an active orange grove and water retention basin, borders undeveloped land that may be is prime foraging and/or nesting habitat for many endangered species including wood storks, peregrine falcons, bald eagles, Audubon's crested caracaras, and snail kites. The western adjacent property is the J.W. Corbett Wildlife Management Area, which would contain similar species. These native upland wildlife corridors will be maintained and preserved in perpetuity.

(a) FWS/NMFS/FWCC comments: The FWS concurred with the Corps' determination that the project may affect but is not likely to adversely affect the eastern indigo snake and the woodstork by letter dated 22 September 2004. The FWS has no objections to the issuance of the permit, but recommended that the Corps coordinate overall project planning with the Everglades Restoration Program and ensure a "no net loss" wetland policy. The Corps has coordinated with the CERP program and has ensured through the WRAP process that the project will result in a "no net loss" of wetlands or waters of the United States.

The NMFS provided comments to the project on 10 September 2004. The NMFS raised concerns with secondary and cumulative effects,

further development of adjacent properties, avoidance and minimization, appropriate mitigation, prior converted wetlands, and evaluation of direct and indirect impacts as a result of the project. The Corps believes that all of the NMFS' concerns have been addressed and resolved. The Corps has evaluated secondary and cumulative effects as described in this SOF. The Corps believes that this project has independent utility from the remaining planned development. Therefore, the Corps will evaluate any cumulative impacts associated with future potential development on adjacent property, the Vavrus Ranch, new road construction, or supporting projects (new exits on the interstate I-95 or the Florida Turnpike, tri-rail extension...) when applications are received that trigger their review. Avoidance, minimization, and mitigation have been addressed in 8(a), (b), and (c). The Corps has assessed the mitigation and believes that construction of surface water ponds with a littoral fringe is appropriate mitigation for impacts to surface water ditches with a narrow fringe of wetland plant species. The Corps also evaluated indirect impacts to adjacent wetlands on the Vavrus Ranch. As a result, vegetative buffers were incorporated into the project to provide added protection and offset the loss of function and value from the change in buffers. The historical wetlands on the site have been previously impacted through agricultural use, which is authorized by NRCS under an agricultural exemption. Therefore, the Corps is not evaluating the impacts associated with the historical wetlands. The Corps has claimed jurisdiction of the agricultural ditches because they are connected to, and tributary to, the C-18 Canal through a weir at the control station at the north end of the Mecca Farms property. Therefore, the Corps will require mitigation for the agricultural ditches.

The FFWCC did not send comments to the Corps or the FWS. However, in a phone conversation with the FWS on 7 December 2004, the FWS conveyed the FFWCC's concerns as they understood. The FFWCC's concerns included secondary and cumulative effects as well as reference to preclude unauthorized take of a State-listed species. The Corps has addressed secondary and

cumulative effects of the project in the response to the NMFS' concerns above. The FFWCC stated to the FWS that neither the DA permit nor the SFWMD permit should authorize a take of a listed species. The Corps does not believe that the DA authorization would authorize a take of a listed species. The EA performed on the site on 8 April 2004, indicated that the site did not contain any listed species with the exception of the American alligator (listed as threatened by similarity of appearance to an American crocodile). However, the potential for listed species to occur on the site exists. The Corps evaluated the list and believed that the wood stork was the only species that would use the site since it is an active orange grove and sand mine.

(b) Anticipated/known impacts: All known impacts have been evaluated, avoided, minimized, and mitigated. For the anticipated impacts, if and when development is proposed in the future for adjacent properties, the Corps will evaluate those permit applications as they are submitted.

(8) Flood hazards: There are no pre-development conditions that indicate a flood-prone area. The applicant has confirmed this with the Palm Beach County Engineering Department and the FEMA. The property has hydrologically contained surface water from the adjacent properties through the use of the perimeter berms and irrigation ditches. The site has been designed and approved by the South Florida Water Management District to have an acceptable flood control with their surface water management pond storage capacity. Issuance of a SFWMD permit ensures that the project has adequate water storage to prevent flooding.

(9) Floodplain values: N/A

(10) Land use: Currently, the land contains sand and gravel pits, citrus groves, and reservoirs and is used for agricultural and mining. On 22 May 1997, the Palm Beach County Board of County Commissioners approved the site for rezoning that allowed an additional 225-acre excavation area for mining.

Secondary effects of the project would take active agricultural lands out of orange production and sand mining. The Board of County Commissioners has also recently approved a zoning amendment that approved the change in land use to support the SCRIPPS development.

(11) Navigation: N/A

(12) Shore erosion and accretion: N/A

(13) Recreation: With the construction of the biotechnological park on a portion of the Mecca Farms parcel, an increase in recreational use may occur in the J.W. Corbett Wildlife Management Park. An increase in State funds would occur with the increase in use. Within the 150-foot upland buffer located in the southern portion of the site, a nature walk has been incorporated into the design plans to help increase passive recreational use.

(14) Water supply: Existing wells supply potable water for use at the current citrus operation. The potable water and wastewater services for the biotechnological research park will be supplied by the Palm Beach County Water Utilities Department (PBCWUD). The PBCWUD stated that they have the ability to run short-term and long-term potable water and wastewater service requirements and have sufficient capacity in reserve to meet the built-out demand of the biotechnological research park.

(15) Water quality: The increase in water control elevation and the creation of lakes instead of ditches will allow for additional water quality treatment, including settling of sediments before entering into the impoundment. The system would detain the first 3 inches of runoff prior to discharge. The existing gravity discharge structure from the impoundment to the C-18 will be modified to restrict the discharge to the C-18 Canal, allowing additional water quality treatment within the impoundment and an additional weir plate will be added. Also, the pump that currently discharges from the ditches directly into the C-18 will not be used. Best management practices,

including silt screen and turbidity barriers, will be used. The project is designed to meet or exceed state water quality standards. Issuance of the SFWMD permit ensures that the project has water quality certification. Secondary effects of water quality would be temporary impacts during the construction phase. Best management practices would prevent any unacceptable impacts from occurring. Cumulative effects of water quality on the C-18 Canal and ultimately the Loxahatchee River would be an improvement from the existing conditions.

(16) Energy needs: The Palm Beach County has a power supply from the existing lines located to the south of the site in the Acreage. This power line is currently being used for the residents in the Acreage.

(17) Safety: Safety is not a concern with this project. All practicable measures will be taken during construction to ensure public safety.

(18) Food and fiber production: As stated above, the site is an active orange grove. Construction of the biotechnological research park will take approximately 500 acres out of orange production. With the many other orange groves in the south Florida area, this is not expected to have a significant adverse effect the local orange production, economy, or the interstate commerce. Cumulative effects may promote the remaining orange groves on the Mecca Farms site to also be taken out of production. Again, this is not expected to cause a significant adverse effect.

(19) Mineral needs: As stated above, the site is an active sand mine. Construction of the biotechnological research park will take approximately 30 acres out of mining. Because the Palm Beach County Board of County Commissioners approved the site for rezoning that allowed an additional 225-acre excavation area for mining, the total impacts present and in the future would remove approximately 255 acres of land from mining. With the other sand and rock mines in the south Florida area, this is not expected to have a significant adverse effect the local sand

availability, the economy, or the interstate commerce. Cumulative effects may deter the remaining orange groves on the Mecca Farms site to be converted to sand mines. Again, this is not expected to cause a significant adverse effect.

(20) Considerations of property ownership: The site was privately owned and utilized as agricultural (an orange grove and sand mine). The landowner has the choice to change the land use and utilize the site as industrial, commercial, or residential, or even as preservation. Palm Beach County has now acquired the land for use to develop SCRIPPS, or to sell off for residential and commercial development. The Corps' responsibility is to process the permit application and evaluate the proposal according to Section 404 of the Clean Water Act of 1972, as amended. As a result of the public notice, the Corps has received several adverse comments from nearby landowners and interested parties. The majority of the commenters objected to the SCRIPPS development. Many of the property owners in the Acreage and Loxahatchee have constructed their home on what used to be the same quality of land that surrounds the Mecca Farms parcel. The difference is that the Mecca Farms parcel is already impacted through agriculture.

b. Describe the relative extent of the public and private need for the proposed structure or work: Public needs include employment opportunities, educational opportunities, and a potential increase in the local tax base. The SCRIPPS is meeting the need for additional biotechnological research in the country and would be the first SCRIPPS facility on the east coast. The SCRIPPS is a part of the country's largest private, non-profit public benefit research organizations, which promotes the betterment of health and human conditions with an emphasis on educational opportunities. Economic as well as quality of life benefits are expected to occur in the general area as a result of new jobs being created, home sales and homes being constructed, and potential future development of a town center with retail stores, the operation a local hospital, and educational opportunities for the public. Since the Palm Beach County elementary and high schools are currently operating at

over 100% capacity, new schools are needed. With the construction of a campus for higher education, the public would have another option to receive a degree from a local university. A local hospital on the western part of the Palm Beach County would also benefit the public. Private needs include property ownership, land use, and economic return on the property.

c. Describe the practicability of using reasonable alternative locations and methods to accomplish the objective of the purposed work where there are unresolved conflicts as to resource use: The site currently supports agricultural use. However, the Development of Regional Impact and the Planned Industrial Park Development approved the SCRIPPS project. This was ratified in the Palm Beach County Resolution that approved the development, Resolution R-2004-2101. Therefore, the Board of County Commissioners has approved a zoning amendment that approved the change in land use. Any conflicts resulting from the change in resource use have been resolved by the Board of County Commissioners' zoning amendment. There are no unresolved conflicts regarding resource use.

d. Describe the extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited: Detrimental impacts are expected to be minimal although they would be permanent in the construction area. The beneficial effects associated with utilization of the property would be permanent.

e. Threatened or endangered species: The proposed project will not adversely affect any threatened or endangered species. The site currently is an active orange grove with frequent human disturbance. Little natural native habitat is available on site. The surrounding land contains orange groves, residential development and natural land. After visiting the site, reviewing the Environmental Assessment (EA), and coordinating with the FWS, the Corps determined that the project may affect, but is not likely to adversely affect the woodstork provided the

mitigation offsets the function and value of the impacted wetlands. The FWS requested that the Corps make a determination for the eastern indigo snake. The Corps made a determination that the project may affect but is not likely to adversely affect the eastern indigo snake based on the inclusion of protective measures as a special condition in our permit in the event that one is found on the site. The FWS concurred with the Corps' determination on 22 September 2004, that the project may affect but is not likely to adversely affect the eastern indigo snake and the woodstork. Therefore, the Corps believes that the project would not adversely affect any threatened or endangered species. The Corps believes that the DA permit will not allow an unauthorized take of a federally-listed species.

f. Corps wetland policy: The only impacts to wetlands are to low ecological value wetland fringes of the ditches as a result of the project. The proposed surface water alteration i.e., filling of 21.3 acres of ditches, is necessary to realize the project purpose. The proposed work should result in minimal adverse environmental impacts. The benefits of the project would outweigh the minimal detrimental impacts. The WRAP performed on the site indicates that the mitigation would exceed the function and value of the impacted ditches. Therefore, the project is in accordance with the Corps wetland policy.

g. Cumulative and Secondary Impacts: As stated previously, the Corps is aware of potential plans to develop the remaining 1,365-acre Mecca Farms parcel and the Vavrus Ranch, as well as construct several new roads to access the future proposed development. The Corps believes that the proposal to construct a 535-acre biotechnology research park has independent utility from the remaining planned development on the 1,919-acre Mecca Farms site, from the development on the Vavrus Ranch, and the construction of the future roads because the biotechnology research park could be constructed solely, without the need for the remaining development or roads. The construction of the SCRIPPS portion of development will go forward without any additional development. Therefore, the cumulative impacts assessment will consider the fact that a permit decision has not

been made on the remaining Mecca Farms Parcel, the planned development on the Vavrus Ranch, nor any associated roads or future projects.

For cumulative effects, the SCRIPPS development on the Mecca Farms parcel may promote further development on the remaining Mecca Farms parcel. Although no permit applications have been received and no permit decisions have been made to allow further development to occur on the remaining Mecca Farms parcel or the Vavrus Ranch, if development were allowed to continue on the adjacent private property, impacts could occur to the surface water ditches and the water catchment area to the northeast of the Mecca Farms site, as well as any possible wetland impacts on the Vavrus Ranch. The Corps decision being made on the SCRIPPS Biotechnical Research Park does not preclude options to provide for continued protection of important aquatic resources on Vavrus Ranch, nor the movement of water from the south to C-18 canal or the Loxahatchee Slough. Indeed, the decision leaves an approximately 900 foot wide area on the western portion of Mecca Farms west of the project for just such purpose in the future. The Corps would evaluate any off-site ditch or wetland impacts for DA jurisdiction. Mitigation would be required for any ditch or wetland impacts, only if the applicant has first demonstrated avoidance and minimization.

The site is currently impacted from agricultural and mining use. Changing the use to commercial/institutional/residential does not appear to have any significant adverse secondary or cumulative impacts associated with the change in land use. The site is bordered by active orange groves and undeveloped public land (Unit 11 Hungryland Slough) to the north, undeveloped private land to the east, an active orange grove and residential development to the south, and Seminole-Pratt Whitney Road (unimproved) and J.W. Corbett Wildlife Management Park to the west. For cumulative impacts on adjacent conservation areas, it is anticipated that development on the 535-acre site would encourage development to be proposed on the remaining Mecca Farms parcel as well as the remaining adjacent private lands, including the Acreage, Loxahatchee, and the Vavrus Ranch. The

Corps is also aware that the Florida Power and Light has plans to construct a power substation on a portion of the J.W. Corbett Wildlife Management Area to supply power to the future development on the 1,919 acres of Mecca Farms. This plan includes a land trade between J.W. Corbett and the Palm Beach County, which would allow the Palm Beach County to own property that would allow a connection of Seminole Pratt Whitney Road to Beeline Highway. This land trade would give the Palm Beach County the required access to Beeline Highway, thus increasing the roadways. Any future plans development in these areas or other public lands that requires the DA authorization will be evaluated and processed by the Corps under a separate application once it is submitted.

The land use in the adjacent Vavrus Ranch would continue to be residential and agricultural; however, further development may occur. The land use in the remaining orange groves on the Mecca parcel could possibly change to residential, industrial, and commercial as a cumulative impact. The potential exists for development to occur on Mecca and the Vavrus Ranch properties because the properties are in private ownership, and Palm Beach County could, and has stated they will, sell portions of Mecca Farms for development. At some point in time, the Corps anticipates applications to be submitted that propose development on these sites whether the biotechnology research park would be constructed on the Mecca Farms parcel or not. The Corps can not be certain whether authorizing the SCRIPPS development would result in such proposed development sooner, or not. With the intense development pressure in northern Palm Beach County, the timing of any development applications may be very similar with or without SCRIPPS on Mecca Farms. Development pressure on Vavrus Ranch would likely be very similar if SCRIPPS were built on the Briger Tract, Parcel 19 or the Park of Commerce. The Corps and EPA conducted an Advanced Identification of Disposal Sites study of the Loxahatchee Slough several years ago, and identified substantial areas of Vavrus Ranch as "developable". However, development on these parcels could only occur if a permit application were submitted, evaluated, and if the Corps finds it to be appropriate,

authorized wetland impacts. The land use in the public lands would not change.

The lands that are currently preserved, i.e., Unit 11 Hungryland Slough and the J.W. Corbett Wildlife Management Park, would not be developed because they are publicly owned and preserved as conservation/environmentally sensitive lands.

When considering cumulative impacts on economics, development of the site with the SCRIPPS research biotechnological park would be a considerable economic benefit to the area. The SCRIPPS research park is estimated to accommodate approximately 18,000 jobs on the site. An increase in available jobs, greater educational opportunities, and more health care facilities would encourage economic growth in the area.

The loss of oranges and sand in the area may have an effect on the supply and cost of those products to grocery stores and construction supply companies. The cumulative effects of the land use change include development of the neighboring residential areas. The Acreage currently has approximately 35,000 residential homes; however, if the project is constructed, the population could increase to 50,000 residential homes in the Acreage. Although the land use in the Acreage would remain the same, approximately 15,000 new single-family residents may possibly move into the area.

For water supply, secondary effects may lessen the drawdown effects that the existing wells are doing. Cumulative effects include possible water supply to residents in the Acreage and nearby residents. When evaluating the water quality, secondary effects would be temporary during the construction phase. Best management practices would prevent any unacceptable impacts from occurring. Cumulative effects of water quality on the C-18 Canal and ultimately the Loxahatchee River would be an improvement from the existing conditions.

h. Corps analysis of comments and responses: A summary of the comments received following the public notice is discussed

in Section 7. Some of the comments pertain to the development on the remainder of the Mecca Farms parcel as well as on the adjacent privately owned lands. The Corps believes that this project is independent from those future plans and will review any possible plans when the permit applications are submitted. The future proposed developments were considered in a cumulative impacts analysis as a possible, potential impact, but only if the Corps receives an application for a project which would require a road to access the future sites or remaining Mecca Farms site. Considering the Corps does not have an application that proposes new road development, the analysis pertaining to adverse impacts from the new development on surrounding lands is not feasible. The Corps has considered comments pertaining to buffers along the Vavrus Ranch property. An analysis was performed to determine the current function and value of the adjacent wetlands with a citrus grove bordering them, and an analysis of the future function and value with the research park bordering the wetlands. Since the analysis showed a slight impact resulting from the development, the Corps requested that the applicant provide a native, vegetated upland buffer along the edge of the Mecca property to offset that loss. The applicant would also preserve a 150-foot native upland buffer between the southern stormwater pond and the existing residential development in the Acreage. This was designed to alleviate some of the public concerns with aesthetics. The Corps has analyzed all of the comments received and feels that they are resolved.

11. Essential Fisheries Habitat (EFH): The project would not adversely affect Essential Fish Habitat because water quality will be improved in the C-18 Canal and ultimately the Loxahatchee River. The impacts are to surface water ditches, which have a low function and value. The creation of the surface water management ponds with the littoral plantings will offset any impacts from the loss of the ditches and provide better habitat, as shown in the WRAP assessment. Therefore, the Corps believes that the intent of the Magnuson-Stevens Fishery Conservation and Management Act has been met.

12. Public Hearing Evaluation: A public hearing would serve to discuss issues and concerns that have not been identified and resolved concerning the project or to evaluate new information that has been received. Several commenters raised concerns with the project, as discussed in 7c. The only concern that was unresolved at that time was secondary effects to the off-site wetlands on the Vavrus Ranch. The Corps incorporated a 50-foot buffer to offset the impact. The Corps believes that all issues have been adequately identified and addressed through the permit evaluation process and all issues have been resolved. The public has had numerous opportunities to provide written and oral comment on this project through meetings where the public was invited and public meetings held by Palm Beach County. The Corps has attended some of the meetings and heard the public comments, which mirror in every way the written comments the Corps has received on its public notice. The Corps public notice comment period was extended because of the hurricanes. Since all of the comments received following the public notice have been alleviated and no new information has been presented that would change our decision, the Corps believes that a public hearing is not needed or required.

13. Determinations:

a. Finding of No Significant Impact (FONSI): Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

b. Compliance with 404(b)(1) Guidelines: Having completed the evaluation in paragraph 8 above, I have determined that the proposed discharge complies with the 404(b)(1) guidelines.

c. Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing

CESAJ-RD-SS SAJ-2004-2859(IP-AAZ)

SUBJECT: Department of the Army Environmental Assessment and Statement
of Findings for the Above-Numbered Permit Application

Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

d. Public Hearing Request: I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.

e. Public Interest Determination: I find that issuance of a Department of the Army permit is not contrary to the public interest.

PREPARED BY:

Alisa A. Zarbo
Project Manager
South Permits Branch

REVIEWED BY:

John F. Studt
Chief, South Permits
Branch

APPROVED BY:

Robert M. Carpenter
Colonel, Corps of Engineers
Commanding

CESAJ-RD-SS SAJ-2004-2959(IP-AAZ)

SUBJECT: Department of the Army Environmental Assessment and Statement
of Findings for the Above-Numbered Permit Application

e. Public Interest Determination: I find that issuance of a
Department of the Army permit is not contrary to the public
interest.

PREPARED BY:

Alisa Zarbo

Alisa A. Zarbo
Project Manager
South Permits Branch

REVIEWED BY:

John F. Studd
John F. Studd
Chief, South Permits
Branch

APPROVED BY:

Robert M. Carpenter
Robert M. Carpenter
Colonel, Corps of Engineers
Commanding